A BUDGET OF PARADOXES

BY

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DAVID EUGENE SMITH.

"UT AGENDO SURGAMUS ARGUENDO GUSTAMUS."
—PTOCHODOKIARCHUS ANAGRAMMATISTES.

VOLUME II.

A BUDGET OF PARADOXES.

VOLUME II.

ON SOME PHILOSOPHICAL ATHEISTS.

With the general run of the philosophical atheists of the last century the notion of a God was an hypothesis. There was left an admitted possibility that the vague somewhat which went by more names than one, might be personal, intelligent, and superintendent. In the works of Laplace,[1] who is sometimes called an atheist from his writings, there is nothing from which such an inference can be drawn: unless indeed a Reverend Fellow of the Royal Society may be held to be the fool who said in his heart, etc., etc., if his contributions to the *Philosophical Transactions* go no higher than *nature*. The following anecdote is well known in Paris, but has never been printed entire. Laplace once went in form to present some edition of his "Système du Monde" to the First Consul, or Emperor. Napoleon, whom some wags had told that this book contained no mention of the name of God, and who was fond of putting embarrassing questions, received it with—"M. Laplace, they tell me you have written this large book on the system of the universe, and have never even mentioned its Creator." Laplace, who, though the most supple of politicians, was as stiff as a martyr on every point of his philosophy or religion (e. g., even under Charles X he never concealed his dislike of the priests), drew himself up and answered

bluntly, "Je n'avais pas besoin de cette hypothèse-là."[2] Napoleon, greatly amused, told this reply to Lagrange, who exclaimed, "Ah! c'est une belle hypothèse; ça explique beaucoup de choses."[3]

It is commonly said that the last words of Laplace were, "Ce que nous connaissons est peu de chose; ce que nous ignorons est immense."[4] This looks like a parody on Newton's pebbles:[5] the following is the true account; it comes to me through one remove from Poisson.[6] After the publication (in 1825) of the fifth volume of the *Mécanique Céleste,* Laplace became gradually weaker, and with it musing and abstracted. He thought much on the great problems of existence, and often muttered to himself, *Qu'est ce que c'est que tout cela!*[7] After many alternations, he appeared at last so permanently prostrated that his family applied to his favorite pupil, M. Poisson, to try to get a word from him. Poisson paid a visit, and after a few words of salutation, said, "J'ai une bonne nouvelle à vous annoncer: on a reçu au Bureau des Longitudes une lettre d'Allemagne annonçant que M. Bessel a vérifié par l'observation vos découvertes théoriques sur les satellites de Jupiter."[8] Laplace opened his eyes and answered with deep

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[2] "I have no need for this hypothesis."

[3] "Ah, it is a beautiful hypothesis; it explains many things."

[4] "What we know is very slight; what we don't know is immense."

[5] Brewster relates (*Life of Sir Isaac Newton,* Vol. II, p. 407) that, a short time before his death, Newton remarked: "I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me."

[6] See Vol. I, p. 292, note 1.

[7] "What is all that!"

[8] "I have some good news to tell you: at the Bureau of Longitudes they have just received a letter from Germany announcing that

gravity, *"L'homme ne poursuit que des chimères."*[9] He never spoke again. His death took place March 5, 1827.

The language used by the two great geometers illustrates what I have said: a supreme and guiding intelligence —apart from a blind rule called *nature of things*—was an *hypothesis*. The absolute denial of such a ruling power was not in the plan of the higher philosophers: it was left for the smaller fry. A round assertion of the non-existence of anything which stands in the way is the refuge of a certain class of minds: but it succeeds only with things subjective; the objective offers resistance. A philosopher of the appropriative class tried it upon the constable who appropriated *him*: I deny your existence, said he; Come along all the same, said the unpsychological policeman.

Euler[10] was a believer in God, downright and straightforward. The following story is told by Thiébault,[11] in his *Souvenirs de vingt ans de séjour à Berlin,*[12] published in his old age, about 1804. This volume was fully received as trustworthy; and Marshall Mollendorff[13] told the Duc de Bassano[14] in 1807 that it was the most veracious of books written by the most honest of men. Thiébault says that he has no personal knowledge of the truth of the story, but

[9] "Man follows only phantoms."

[10] See Vol. I, page, 382, note 13.

[11] Dieudonné Thiébault (1733-1807) was a Jesuit in his early life, but he left the order and took up the study of law. In 1765 he went to Prussia and became a favorite of Frederick the Great. He returned to France in 1785 and became head of the Lycée at Versailles.

[12] *Memories of Twenty Years of Residence in Berlin.* There was a second French and an English edition in 1805.

[13] Richard Joachim Heinrich von Mollendorff (1724-1816) began his career as a page of Frederick the Great (1740) and became field marshal (1793) and commander of the Prussian army on the Rhine (1794).

[14] Hugues Bernard Maret (1763-1839) was not Duc de Bassano in 1807, this title not being conferred upon him until 1809. He was ambassador to England in 1792 and to Naples in 1793. Napoleon made him head of the cabinet and his special confidant. The Bour-

that it was believed throughout the whole of the north of
Europe. Diderot[15] paid a visit to the Russian Court at the
invitation of the Empress. He conversed very freely, and
gave the younger members of the Court circle a good deal
of lively atheism. The Empress was much amused, but
some of her councillors suggested that it might be desirable
to check these expositions of doctrine. The Empress did
not like to put a direct muzzle on her guest's tongue, so the
following plot was contrived. Diderot was informed that
a learned mathematician was in possession of an algebraical
demonstration of the existence of God, and would give it
him before all the Court, if he desired to hear it. Diderot
gladly consented: though the name of the mathematician
is not given, it was Euler. He advanced towards Diderot,
and said gravely, and in a tone of perfect conviction:
Monsieur, $(a+b^n)/n = x$, donc Dieu existe; répondez![16]
Diderot, to whom algebra was Hebrew, was embarrassed and
disconcerted; while peals of laughter rose on all sides. He
asked permission to return to France at once, which was
granted.

ROTATION OF THE MOON.

An examination of the Astronomical doctrine of the Moon's
rotation. By J. L.[1] Edinburgh, 1847, 8vo.

A systematic attack of the character afterwards made
with less skill and more notice by Mr. Jellinger Symons.

July 1866, J. L. appears as Mr. James Laurie, with a
new pamphlet "The Astronomical doctrines of the Moon's
rotation...." Edinburgh. Of all the works I have seen
on the question, this is the most confident, and the sorest.

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[15] Denis Diderot (1713-1784), whose *Lettre sur les aveugles*
(1749) introduced him to the world as a philosopher, and whose
work on the *Encyclopédie* is so well known.

[16] "Sir, $(a + b^n)/n = x$, whence God exists; answer!"

A writer on astronomy said of Mr. Jellinger Symons,[2] "Of course he convinced no one who knew anything of the subject." This "ungenerous slur" on the speculator's memory appears to have been keenly felt; but its truth is admitted. Those who knew anything of the subject are "the so-called men of science," whose three P's were assailed; prestige, pride, and prejudice: this the author tries to effect for himself with three Q's; quibble, quirk, and quiddity. He explains that the Scribes and Pharisees would not hear Jesus, and that the lordly bishop of Rome will not cast his tiara and keys at the feet of the "humble presbyter" who now plays the part of pope in Scotland. I do not know whom he means: but perhaps the friends of the presbyter-pope may consider this an ungenerous slur. The best proof of the astronomer is just such "as might have been expected from the merest of blockheads"; but as the giver is of course not a blockhead, this circumstance shows how deeply blinded by prejudice he must be.

Of course the paradoxers do not persuade any persons who know their subjects: and so these Scribes and Pharisees reject the Messiah. We must suppose that the makers of this comparison are Christians: for if they thought the Messiah an enthusiast or an impostor, they would be absurd in comparing those who reject what they take for truth with others who once rejected what they take for falsehood. And if Christians, they are both irreverent and blind to all analogy. The Messiah, with His Divine mission proved by miracles which all might see who chose to look, is degraded into a prototype of James Laurie, ingeniously astronomizing upon ignorant geometry and false logic, and comparing to blockheads those who expose his nonsense. Their comparison is as foolish as—supposing

them Christians—it is profane: but, like errors in general, its other end points to truth. There were Pseudochrists and Antichrists; and a Concordance would find the real forerunners of all the paradoxers. But they are not so clever as the old false prophets: there are none of whom we should be inclined to say that, if it were possible, they would deceive the very educated. Not an Egyptian among them all can make uproar enough to collect four thousand men that are murderers—of common sense—to lead out into the wilderness. Nothing, says the motto of this work, is so difficult to destroy as the errors and false facts propagated by illustrious men whose words have authority. I deny it altogether. There are things much more difficult to destroy: it is much more difficult to destroy the truths and real facts supported by such men. And again, it is much more difficult to prevent men of no authority from setting up false pretensions; and it is much more difficult to destroy assertions of fancy speculation. Many an error of thought and learning has fallen before a gradual growth of thoughtful and learned opposition. But such things as the quadrature of the circle, etc., are never put down. And why? Because thought can influence thought, but thought cannot influence self-conceit: learning can annihilate learning: but learning cannot annihilate ignorance. A sword may cut through an iron bar; and the severed ends will not reunite: let it go through the air, and the yielding substance is whole again in a moment.

> Miracles *versus* Nature: being an application of certain propositions in the theory of chances to the Christian miracles. By Protimalethes.[3] Cambridge, 1847, 8vo.

The theory, as may be supposed, is carried further than most students of the subject would hold defensible.

[3] "Protimalethes" followed this by another work along the same line the following year, *The Independence of the Testimony of St.*

An astronomical Lecture. By the Rev. R. Wilson.[4] Greenock, 1847, 12mo.

Against the moon's rotation on her axis.

[Handed about in the streets in 1847: I quote the whole:] Important discovery in astronomy, communicated to the Astronomer Royal, December 21st, 1846. That the Sun revolve round the Planets in 25748²/₅ years, in consequence of the combined attraction of the planets and their satellites, and that the Earth revolve round the Moon in 18 years and 228 days. D. T. GLAZIER [altered with a pen into GLAZION.] Price one penny.

1847. In the *United Service Magazine* for September, 1847, Mrs. Borron,[5] of Shrewsbury, published some remarks tending to impeach the fact that Neptune, the planet found by Galle,[6] really was the planet which Le Verrier and Adams[7] had a right to claim. This was followed (September 14) by two pages, separately circulated, of "Further Observations upon the Planets Neptune and Uranus, with a Theory of Perturbations"; and (October 19, 1848) by three pages of "A Review of M. Leverrier's Exposition." Several persons, when the remarkable discovery was made, contended that the planet actually discovered was an intruder; and the future histories of the discovery must contain some account of this little afterpiece. Tim Linkinwater's theory that there is no place like London for coincidences, would have been utterly overthrown in favor of what they used to call the celestial spaces, if there had been a planet which by chance was put

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[4] Wilson had already taken up the lance against science in his *Strictures on Geology and Astronomy, in reference to a supposed want of harmony between these sciences and some parts of Divine Revelation,* Glasgow, 1843. He had also ventured upon poetry in his *Pleasures of Piety,* Glasgow, 1837.

[5] Mrs. Borron was Elizabeth Willesford Mills before her marriage. She made an attempt at literature in her *Sibyl's Leaves,* London (printed at Devonport), 1826.

[6] See Vol. I, page 386, note 10.

[7] See Vol. I, page 43, notes 7 and 8.

near the place assigned to Neptune at the time when the discovery was made.

EARLY IDEAS OF AVIATION.

Aerial Navigation; containing a description of a proposed flying machine, on a new principle. By Dædalus Britannicus. London, 1847, 8vo.

In 1842-43 a Mr. Henson[1] had proposed what he called an aeronaut steam-engine, and a Bill was brought in to incorporate an "Aerial Transit Company." The present plan is altogether different, the moving power being the explosion of mixed hydrogen and air. Nothing came of it—not even a Bill. What the final destiny of the balloon may be no one knows: it may reasonably be suspected that difficulties will at last be overcome. Darwin,[2] in his "Botanic Garden" (1781), has the following prophecy:

> "Soon shall thy arm, unconquered Steam! afar
> Drag the slow barge, or drive the rapid car;
> Or, on wide-waving wings expanded, bear
> The flying chariot through the fields of air."

Darwin's contemporaries, no doubt, smiled pity on the poor man. It is worth note that the two true prophecies have been fulfilled in a sense different from that of the predictions. Darwin was thinking of the suggestion of Jonathan Hulls,[3] when he spoke of dragging the slow barge: it is only very recently that the steam-tug has been employed on the canals. The car was to be driven, not drawn, and on the common roads. Perhaps, the flying chariot will

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[1] His flying machine, designed in 1843, was one of the earliest attempts at aviation on any extensive scale.

[2] Erasmus Darwin (1731-1802) was the grandfather of Charles Darwin. The work here mentioned had great influence, being translated into French, Portuguese, and Italian. Canning parodied it in his *Loves of the Triangles*

be something of a character which we cannot imagine, even with the two prophecies and their fulfilments to help us.[4]

THE SECRET OF THE UNIVERSE DIVULGED.

A book for the public. New Discovery. The causes of the circulation of the blood; and the true nature of the planetary system. London, 1848, 8vo.

Light is the sustainer of motion both in the earth and in the blood. The natural standard, the pulse of a person in health, four beats to one respiration, gives the natural second, which is the measure of the earth's progress in its daily revolution. The Greek fable of the Titans is an elaborate exposition of the atomic theory: but any attempt to convince learned classics would only meet their derision; so much does long-fostered perjudice stand in the way of truth. The author complains bitterly that men of science will not attend to him and others like him: he observes, that "in the time occupied in declining, a man of science might test the merits." This is, alas! too true; so well do applicants of this kind know how to stick on. But every rule has its exception: I have heard of one. The late Lord Spencer[1]—the Lord Althorp of the House of Commons—told me that a speculator once got access to him at the Home Office, and was proceeding to unfold his way of serving the public. "I do not understand these things," said Lord Althorp, "but I happen to have —— (naming an eminent engineer) upstairs; suppose you talk to him on the subject." The discoverer went up, and in half-an-hour returned, and said, "I am very much obliged to your Lordship for introducing me to Mr. ——; he has convinced me

[4] The notes on this page were written on the day of the funeral of Wilbur Wright, June 1, 1912, the man who realized all of these prophecies, and then died a victim of municipal crime,—of typhoid fever.

[1] John Charles, third Earl Spencer (1782-1845), to whose efforts

that I am quite wrong." I supposed, when I heard the story—but it would not have been seemly to say it—that Lord A. exhaled candor and sense, which infected those who came within reach: he would have done so, if anybody.

THE TRISECTION AND QUADRATURE AGAIN.

A method to trisect a series of angles having relation to each other; also another to trisect any given angle. By James Sabben. 1848 (two quarto pages).

"The consequence of years of intense thought": very likely, and very sad.

1848. The following was sent to me in manuscript. I give the whole of it:

"*Quadrature of the Circle.*—A quadrant is a curvilinear angle traversing round and at an equal distance from a given point, called a center, no two points in the curve being at the same angle, but irreptitiously graduating from 90 to 60. It is therefore a mean angle of 90 and 60, which is 75, because it is more than 60, and less than 90, approximately from 60 to 90, and from 90 to 60, with equal generation in each irreptitious approximation, therefore meeting in 75, and which is the mean angle of the quadrant.

"Or suppose a line drawn from a given point at 90, and from the same point at 60. Let each of these lines revolve on this point toward each other at an equal ratio. They will become one line at 75, and bisect the curve, which is one-sixth of the entire circle. The result, taking 16 as a diameter, gives an area of 201.072400, and a circumference of 50.2681.

"The original conception, its natural harmony, and the result, to my own mind is a demonstrative truth, which I presume it right to make known, though perhaps at the hazard of unpleasant if not uncourteous remarks."

I have added punctuation: the handwriting and spelling

are those of an educated person; the word *irreptitious* is indubitable. The whole is a natural curiosity.

> The quadrature and exact area of the circle demonstrated. By Wm. Peters. 8vo. *n. d.* (circa 1848).[1]
>
> Suggestions as to the necessity for a revolution in philosophy; and prospectus for the establishment of a new quarterly, to be called the *Physical Philosopher and Heterodox Review*. By Q. E. D. 8vo. 1848.

These works are by one author, who also published, as appears by advertisement,

"Newton rescued from the precipitancy of his followers through a century and a half,"[2] and "Dangers along a coast by correcting (as it is called) a ship's reckoning by bearings of the land at night fall, or in a fog, nearly out of print. Subscriptions are requested for a new edition."

The area of a circle is made four-fifths of the circumscribed square: proved on an assumption which it is purposed to explain in a longer essay.[3] The author, as Q. E. D., was in controversy with the *Athenæum* journal, and criticised a correspondent, D., who wrote against a certain class of discoverers. He believed the common theories of hydrostatics to be wrong, and one of his questions was:

"Have you ever taken into account anent gravity and gravitation the fact that a five grain cube of cork will of itself half sink in the water, whilst it will take 20 grains of brass, which will sink of itself, to pull under the other half? Fit this if you can, friend D., to your notions of gravity and specific gravity, as applied to the construction of a universal law of gravitation."

This the *Athenæum* published—but without some Italics, for which the editor was sharply reproved, as a sufficient

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[1] This was published in London in 1851 instead of 1848.

[2] This appeared in 1846.

[3] This was done in *The Circle Squared*, published at Brighton in 1865.

specimen of the *quod erat* D. *monstrandum* : on which the author remarks—"D,—Wherefore the e caret? is it D apostrophe? D', D'M, D'Mo, D'Monstrandum; we cannot find the *wit* of it." This I conjecture to contain an illusion to the name of the supposed author; but whether De Mocritus, De Mosthenes, or De Moivre was intended, I am not willing to decide.

> The Scriptural Calendar and Chronological Reformer, for the statute year 1849. Including a review of recent publications on the Sabbath question. London, 1849, 12mo.[4]

This is the almanac of a sect of Christians who keep the Jewish Sabbath, having a chapel at Mill Yard, Goodman's Fields. They wrote controversial works, and perhaps do so still; but I never chanced to see one.

> Geometry *versus* Algebra; or the trisection of an angle geometrically solved. By W. Upton, B. A.[5] Bath (circa 1849). 8vo.

The author published two tracts under this title, containing different alleged proofs: but neither gives any notice of the change. Both contain the same preface, complaining of the British Association for refusing to examine the production. I suppose that the author, finding his first proof wrong, invented the second, of which the Association never had the offer; and, feeling sure that they would have equally refused to examine the second, thought it justifiable to

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[4] It first appeared in 1847, under the title, *The Scriptural Calendar and Chronological Reformer, 1848. Including a review of tracts by Dr. Wardlaw and others on the Sabbath question. By W. H. Black.* The one above mentioned, for 1849, was printed in 1848, and was also by Black (1808-1872). He was pastor of the Seventh Day Baptists and was interested in archeology and in books. He catalogued the manuscripts of the Ashmolean Museum at Oxford.

[5] William Upton, a Trinity College man, Dublin. He also wrote *Upton's Physioglyphics,* London, 1844; *Pars prima. Geometria vindicata; antiquorumque Problematum, ad hoc tempus desperatorum, Trisectionis Anguli, Circulique Quadraturae, Solutio, per Eucliden effecta,* London (printed at Southampton), 1847; *The Uptonian Trisection,* London, 1866; and *The Circle Squared,* London, 1872.

present that second as the one which they had refused. Mr. Upton has discovered that the common way of finding the circumference is wrong, would set it right if he had leisure, and, in the mean time, has solved the problem of the duplication of the cube.

The trisector of an angle, if he demand attention from any mathematician, is bound to produce, from his construction, an expression for the sine or cosine of the third part of any angle, in terms of the sine or cosine of the angle itself, obtained by help of no higher than the square root. The mathematician knows that such a thing cannot be; but the trisector virtually says it can be, and is bound to produce it, to save time. This is the misfortune of most of the solvers of the celebrated problems, that they have not knowledge enough to present those consequences of their results by which they can be easily judged. Sometimes they have the knowledge and quibble out of the use of it. In many cases a person makes an honest beginning and presents what he is sure is a solution. By conference with others he at last feels uneasy, fears the light, and puts self-love in the way of it. Dishonesty sometimes follows. The speculators are, as a class, very apt to imagine that the mathematicians are in fraudulent confederacy against them: I ought rather to say that each one of them consents to the mode in which the rest are treated, and fancies conspiracy against himself. The mania of conspiracy is a very curious subject. I do not mean these remarks to apply to the author before me.

One of Mr. Upton's trisections, if true, would prove the truth of the following equation:

$$3 \cos (\theta/3) = 1 + \sqrt{(4 - \sin^2 \theta)}$$

which is certainly false.[6]

[6] For example, if $\theta = 90°$ we should have $3 \cos 30° = 1 +$

In 1852 I examined a terrific construction, at the request of the late Dr. Wallich,[7] who was anxious to persuade a poor countryman of his, that trisection of the angle was waste of time. One of the principles was, that "magnitude and direction determine each other." The construction was equivalent to the assertion that, θ being any angle, the cosine of its third part is

$$\sin 3\theta . \cos(5\theta/2) + \sin{}^2\theta \sin(5\theta/2)$$

divided by the square root of

$$\sin^2 3\theta . \cos^2(5\theta/2) + \sin^4\theta + \sin 3\theta . \sin 5\theta . \sin^2 \theta.$$

This is from my rough notes, and I believe it is correct.[8] It is so nearly true, unless the angle be very obtuse, that common drawing, applied to the construction, will not detect the error. There are many formulae of this kind: and I have several times found a speculator who has discovered the corresponding construction, has seen the approximate success of his drawing—often as great as absolute truth could give in graphical practice,—and has then set about his demonstration, in which he always succeeds to his own content.

There is a trisection of which I have lost both cutting and reference: I think it is in the *United Service Journal*. I could not detect any error in it, though certain there must

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[7] Nathaniel Wallich (1786-1854) was surgeon at the Danish settlement at Serampore when the East India Company took over the control in 1807. He entered the British medical service and was invalided to England in 1828. His *Plantae Asiaticae Rariores* (3 vols., London, 1830-1832) was recognized as a standard. He became vice-president of the Linnean Society, F. R. S., and fellow of the Royal Asiatic Society.

[8] But if $\theta = 90°$ this asserts that

$$\cos 30° = \frac{\sin 270° . \cos 225° + \sin{}^2 90° . \sin 225°}{\sqrt{\sin^2 270° . \cos^2 225° + \sin^4 90° + \sin 270° . \sin 450° . \sin^2 90°}},$$

or that

$$\tfrac{1}{2}\sqrt{3} = \frac{-1 . (-1/\sqrt{2}) + 1 . (-1/\sqrt{2})}{\sqrt{1 . \tfrac{1}{2} + 1 - 1.1.1}} = 0/\sqrt{\tfrac{1}{2}},$$

so that De Morgan must have made some error in copying

be one. At least I discovered that two parts of the diagram were incompatible unless a certain point lay in line with two others, by which the angle to be trisected—and which was trisected—was bound to be either 0° or 180°.

Aug. 22, 1866. Mr. Upton sticks to his subject. He has just published "The Uptonian Trisection. Respectfully dedicated to the schoolmasters of the United Kingdom." It seems to be a new attempt. He takes no notice of the sentence I have put in italics: nor does he mention my notice of him, unless he means to include me among those by whom he has been "ridiculed and sneered at" or "branded as a brainless heretic." I did neither one nor the other: I thought Mr. Upton a paradoxer to whom it was likely to be worth while to propound the definite assertion now in italics; and Mr. Upton does not find it convenient to take issue on the point. He prefers general assertions about algebra. So long as he cannot meet algebra on the above question, he may issue as many "respectful challenges" to the mathematicians as he can find paper to write: he will meet with no attention.

There is one trisection which is of more importance than that of the angle. It is easy to get half the paper on which you write for margin; or a quarter; but very troublesome to get a third. Show us how, easily and certainly, to fold the paper into three, and you will be a real benefactor to society.

Early in the century there was a Turkish trisector of the angle, Hussein Effendi, who published two methods. He was the father of Ameen Bey, who was well known in England thirty years ago as a most amiable and cultivated gentleman and an excellent mathematician. He was then a student at Cambridge; and he died, years ago, in command of the army in Syria. Hussein Effendi was instructed in mathematics by Ingliz Selim Effendi, who translated a work

of Bonnycastle[9] into Turkish.[10]   This Englishman was
Richard Baily, brother of Francis Baily[11] the astronomer,
who emigrated to Turkey in his youth, and adopted the
manners of the Turks, but whether their religion also I
never heard, though I should suppose he did.

I now give the letters from the agricultural laborer and
his friend, described on page 12, Vol. I. They are curiosi-
ties; and the history of the quadrature can never be well
written without some specimens of this kind:

"Doctor Morgan, Sir. Permit me to address you

        "Brute Creation may perhaps enjoy the faculty
of beholding visible things with a more penitrating eye than
ourselves. But Spiritual objects are as far out of their
reach as though they had no being

"Nearest therefore to the brute Creation are those men
who Suppose themselves to be so far governed by external
objects as to believe nothing but what they See and feel
And Can accomedate to their Shallow understanding and
Imaginations

"My Dear Sir Let us all Consult ourselves by the wise
proverb.

"I believe that evry man[s] merit & ability aught to be
appreciated and valued In proportion to its worth & utility

"In whatever State or Circumstances they may for-
tunately or unfortunately be placed

"And happy it is for evry man to know his worth and
place

"When a Gentleman of your Standing in Society Clad
with those honors Can not understand or Solve a problem
That is explicitly explained by words and Letters and

mathematically operated by figuers He had best consult the wise proverd

"Do that which thou Canst understand and Comprehend for thy good.

"I would recommend that Such Gentleman Change his business .

"And appropriate his time and attention to a Sunday School to Learn what he Could and keep the Litle Children form durting their Close

"With Sincere feelings of Gratitude for your weakness and Inability I am

"Sir your Superior in Mathematics ——"
"1849 June th29."

"Dor Morgin Sir
"I wrote and Sent my work to Professor —— of —— State of —— United States

"I am now in the possession of the facts that he highly approves of my work. And Says he will Insure me Reward in the States

"I write this that you may understand that I have knowledge of the unfair way that I am treated In my own nati County

"I am told and have reasons to believe that it is the Clergy that treat me so unjust.

"I am not Desirous of heaping Disonors upon my own nation. But if I have to Leave this kingdom without my Just dues. The world Shall know how I am and have been treated.

"I am Sir Desirous of my
"Just dues ——"
"1849 July 3."

"July 7th, 1849.

"Sir, I have been given to understand that a friend of

such tho' lowly his origine; nay not only not ashamed but proud of doing so for I am one of those who esteem and respect a man according to his ability and probity, deeming with Dr. Watts 'that the mind is the standard of the man,'[12] has laid before you and asked your opinion of his extraordinary performance, viz. the quadrature of the circle, he did this with the firmest belief that you would not only treat the matter in a straightforward manner but with the conviction that from your known or supposed knowledge of mathematicks would have given an upright and honorable decision upon the subject; but the question is have you done so? Could I say yes I would with the greatest of pleasure and have congratulated you upon your decision whatever it might have been but I am sorry to say that I cannot your letter is a paltry evasion, you say 'that it is a great pity that you (Mr. ——) should have attempted this (the quadrature of the circle) for your mathematical knowledge is not sufficient to make you know in what the problem consists,' you don't say in what it does consist *according to your ideas,* oh! no nothing of the sort, you enter into no disquisition upon the subject in order to show where you think Mr.—— is wrong and why you have not is simply—*because you cannot*—you know that he has done it and what is if I am not wrongly informed *you have been heard to say so.* He has done what you nor any other mathematician as those who call themselves such have done. And what is the reason that you will not candidly acknowledge to him as you have to others that he has squared the circle shall I tell you? it is because he has performed the feat to obtain the glory of which mathematicians have battled from time immemorial that they might encircle their brows with a wreath of laurels far more glorious than ever conqueror won it is simply this that it is a poor man a

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[12] Probably in *The Improvement of the Mind* which Isaac Watts (1674-1748) published in 1741. His *Horae Lyricae* appeared in 1706, and the *Hymns,* by which he is still well known, in 1707.

humble artisan who has gained that victory that you don't like to acknowledge it you don't like to be beaten and worse to acknowledge that you have miscalculated, you have in short too small a soul to acknowledge that he is right.

"I was asked my opinion and *I* gave it unhesitatingly in the affirmative and I am backed in my opinion not only by Mr. —— a mathematician and watchmaker residing in the boro of Southwark but by no less an authority than the Professor of mathematics of —— College —— —— United States Mr.—— and I presume that he at least is your equal as an authority and Mr. —— says that the government of the U. S. will recompense M. D. for the discovery he has made if so what a reflection upon Old england the boasted land of freedom the nursery of arts and sciences that her sons are obliged to go to a foreign country to obtain that recompense to which they are justly entitled

"In conclusion I had to contradict an assertion you made to the effect that 'there is not nor ever was any reward offered by the government of this country for the discovery of the quadrature of the circle.' I beg to inform you that there *was* but that it having been deemed an impossibility the government has withdrawn it. I do this upon no less an authority than the Marquis of Northampton.[13]

"I am, sir, yours ——"

"Dr. Morgan."

THE MOON'S ROTATION.

Notes on the Kinematic Effects of Revolution and Rotation, with reference to the Motions of the Moon and of the earth. By Henry Perigal, Jun. Esq. London, 1846-1849, 8vo.

On the misuse of technical terms. Ambiguity of the terms *Rotation* and *Revolution,* owing to the double meaning improperly

[13] Spencer Joshua Alwyne Compton, second Marquis of Northampton (1790-1851), was a poet, a scientist, and a statesman. He was president of the Royal Society from 1838 to 1849.

attributed to each of the words. (No date nor place, but by Mr. Perigal,[1] I have no doubt, and containing letters of 1849 and 1850.)

The moon controversy. Facts *v.* Definitions. By H. P., Jun. London, 1856, 8vo. (pp. 4.)

Mr. Henry Perigal helped me twenty years ago with the diagrams, direct from the lathe to the wood, for the article "Trochoidal Curves," in the *Penny Cyclopædia*: these cuts add very greatly to the value of the article, which, indeed, could not have been made intelligible without them. He has had many years' experience, as an amateur turner, in combination of double and triple circular motions, and has published valuable diagrams in profusion. A person to whom the double circular motion is familiar in the lathe naturally looks upon one circle moving upon another as in *simple* motion, if the second circle be fixed to the revolving radius, so that one and the same point of the moving circle travels upon the fixed circle. Mr. Perigal commenced his attack upon the moon for moving about her axis, in the first of the tracts above, ten years before Mr. Jellinger Symons;[2] but he did not think it necessary to make it a subject for the *Times* newspaper. His familiarity with combined motions enabled him to handle his arguments much better than Mr. J. Symons could do: in fact, he is the clearest assailant of the lot which turned out with Mr. J. Symons. But he is as wrong as the rest. The assault is now, I suppose, abandoned, until it becomes epidemic again. This it will do: it is one of those fallacies which are very tempting. There was a dispute on the subject in 1748, between James Ferguson[3] and an anonymous opponent; and I think there have been others.

[1] Besides the writings here mentioned Perigal published a work on *Geometric Maps* (London, 1853), and *Graphic Demonstrations of Geometric Problems* (1891).

[2] See Vol. II, page 5, note 2.

[3] James Ferguson (1710-1776) was a portrait painter, an astronomer, and a popular writer and lecturer on various subjects.

A poet appears in the field (July 19, 1863) who calls himself Cyclops, and writes four octavo pages. He makes a distinction between *rotation* and *revolution*; and his doctrines and phrases are so like those of Mr. Perigal that he is a follower at least. One of his arguments has so often been used that it is worth while to cite it:

> "Would Mathematicals—forsooth—
> If true, have failed to prove its truth?
> Would not they—if they could— submit
> Some overwhelming proofs of it?
> But still it totters *proofless*! Hence
> There's strong presumptive evidence
> None do—or can—such proof profound
> Because *the dogma is unsound.*
> For, were there means of doing so,
> They would have proved it long ago."

This is only one of the alternatives. Proof requires a person who can give and a person who can receive. I feel inspired to add the following:

> "A blind man said, As to the Sun,
> I'll take my Bible oath there's none;
> For if there had been one to show
> They would have shown it long ago.
> How came he such a goose to be?
> Did he not know he couldn't see?
> Not he!"

The absurdity of the verses is in the argument. The writer was not so ignorant or so dishonest as to affirm that nothing had been offered by the other side as proof; accordingly, his syllogism amounts to this: If your proposition were true, you could have given proof satisfactory to *me*; but this you have not done, therefore, your proposition is not true.

The echoes of the moon-controversy reached Benares in 1857, in which year was there published a pamphlet "Does the Moon Rotate?" in Sanskrit and English. The

arguments are much the same as those of the discussion at home.

ON THE NAMES OF RELIGIOUS BODIES.

We see that there are paradoxers in argument as well as in assertion of fact: my plan does not bring me much into contact with these; but another instance may be useful. Sects, whether religious or political, give themselves names which, in meaning, are claimed also by their opponents; loyal, liberal, conservative (of good), etc. have been severally appropriated by parties. *Whig* and *Tory* are unobjectionable names: the first—which occurs in English ballad as well as in Scotland—is sour milk;[1] the second is a robber. In theology, the Greek Church is *Orthodox,* the Roman is *Catholic,* the modern Puritan is *Evangelical*, etc.

The word *Christian* (Vol. I, p. 248[2]) is an instance. When words begin, they carry their meanings. The Jews, who had their Messiah to come, and the followers of Jesus of Nazareth, who took *Him* for their Messiah, were both *Christians* (which means *Messianites*): the Jews would never have invented the term to signify *Jesuans,* nor would the disciples have invented such an ambiguous term for themselves; had they done so, the Jews would have disputed it, as they would have done in later times if they had had fair play. The Jews of our day, I see by their newspapers, speak of Jesus Christ as the *Rabbi Joshua.* But the

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[1] In the old ballad of King Alfred and the Shepherd, when the latter is tempting the disguised king into his service, he says:

> "Of whig and whey we have good store,
> And keep good pease-straw fire."

Whig is then a preparation of milk. But another commonly cited derivation may be suspected from the word *whiggamor* being used before *whig,* as applied to the political party; *whig* may be a contraction. Perhaps both derivations conspired: the word *whiggamor,* said to be a word of command to the horses, might contract into *whig,* and the contraction might be welcomed for its own native meaning.—A. De M.

[2] This was p. 147 in the first edition.

heathens, who knew little or nothing about the Jewish hope, would naturally apply the term *Christians* to the only followers of a *Messiah* of whom they had heard. For the *Jesuans* invaded them in a missionary way; while the Jews did not attempt, at least openly, to make proselytes.

All such words as Catholic, etc., are well enough as mere nomenclature; and the world falls for the most part, into any names which parties choose to give themselves. Silly people found inferences on this concession; and, as usually happens, they can cite some of their betters. St. Augustine,[3] a freakish arguer, or, to put it in the way of an old writer, *lectorem ne multiloquii tædio fastidiat, Punicis quibusdam argutiis recreare solet,*[4] asks, with triumph, to what chapel a stranger would be directed, if he inquired the way to the *Catholic assembly.* But the best exhibition of this kind in our own century is that made by the excellent Dr. John Milner,[5] in a work (first published in 1801 or 1802) which I suppose still circulates, "The End of Religious Controversy": a startling title which, so far as its truth is concerned, might as well have been "The floor of the bottomless pit." This writer, whom every one of his readers will swear to have been a worthy soul, though many, even of his own sect, will not admire some of his logic, speaks as follows:

"Letter xxv. *On the true Church being Catholic.* In treating of this third mark of the true Church, as expressed in our common creed, I feel my spirits sink within me, and I am almost tempted to throw away my pen in despair. For what chance is there of opening the eyes of candid Protestants to the other marks of the Church, if they are capable of keeping them shut to this? Every time they address the

[3] St. Augustine (354-430) was bishop of Hippo. His *Confessiones,* in 13 books, was written in 397, and his *De Civitate Dei* in 426.

[4] "He was wont to indulge in certain Punic subtleties lest he should weary the reader by much speaking."

[5] John Milner (1751-1826), bishop of Castabala, a well-known

God of Truth, either in solemn worship or in private devotion [stretch of rhetoric], they are forced, each of them, to repeat: *I believe in* THE CATHOLIC *Church,* and yet if I ask any of them the question: *Are you a* CATHOLIC? he is sure to answer me, *No, I am a* PROTESTANT! Was there ever a more glaring instance of inconsistency and self-condemnation among rational beings!"

> "John Milner, honest and true,
> Did what honest people still may do,
> If they write for the many and not for the few,
> But what by and bye they must eschew."

He *shortened his clause*; and for a reason. If he had used the whole epithet which he knew so well, any one might have given his argument a half-turn. Had he written, as he ought, "the *Holy* Catholic Church" and then argued as above, some sly Protestant would have parodied him with "and yet if I ask any of them the question: *Are you* HOLY? he is sure to answer me *No, I am a* SINNER." To take the adjective from the Church, and apply it to the individual partisan, is recognized slipslop, but not ground of argument. If Dr. M. had asked his Protestant whether he belonged to the Catholic *Church,* the answer would have been Yes, but not to the Roman branch. When he put his question as he did, he was rightly answered and in his own division. This leaving out words is a common practice, especially when the omitter is in authority, and cannot be exposed. A year or two ago a bishop wrote a snubbing letter to a poor parson, who had complained that he was obliged, in burial, to send the worst of sinners to everlasting happiness. The bishop sternly said, "*hope*[6] is not *assur-*

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[6] It will be said that when the final happiness is spoken of in "sure and certain hope," it is *the* Resurrection, generally; but when afterwards application is made to the individual, simple "hope" is all that is predicated which merely means "wish?" I know it: but just before the general declaration, it is declared that it *has* pleased God of his great mercy to *take unto Himself,* the soul of our dear brother: and between the "hopes" hearty thanks are given that it *has* pleased God to deliver our dear brother out of the miseries of

ance." Could the clergyman have dared to answer, he would have said, "No, my Lord! but *'sure and certain* hope' is as like assurance as a *minikin* man is like a dwarf." Sad to say, a theologian must be illogical: I feel sure that if you took the clearest headed writer on logic that ever lived, and made a bishop of him, he would be shamed by his own books in a twelvemonth.

Milner's sophism is glaring: but why should Dr. Milner be wiser than St. Augustine, one of his teachers? I am tempted to let out the true derivation of the word *Catholic, as exclusively applied to the Church of Rome.* All can find it who have access to the *Rituale* of Bonaventura Piscator[7] (lib. i. c. 12, *de nomine Sacræ Ecclesiæ,* p. 87 of the Venice

this wicked world, with an additional prayer that the number of the elect may shortly be accomplished. All which means, that our dear brother is declared to be taken to God, to be in a place not so miserable as this world—a description which excludes the "wicked place"—and to be of the elect. Yes, but it will be said again! do you not know that when this Liturgy was framed, all who were not in the road to Heaven were excommunicated, and could not have the burial service read over them. Supposing the fact to have been true in old time, which is a very spicy supposition, how does that excuse the present practice? Have you a right *always* to say what you believe *cannot always* be true, because you think it was once *always* true? Yes, but, choose whom you please, you cannot be *certain* He is *not* gone to Heaven. True, and choose which Bishop you please, you cannot be demonstratively *certain,* he is *not* a concealed unbeliever: may I therefore say of the whole bench, *singulatim et seriatim,* that they *are* unbelievers? No! No! The voice of common sense, of which common logic is a part, is slowly opening the eyes of the multitude to the unprincipled reasoning of theologians. Remember 1819. What chance had Parliamentary Reform when the House of Commons thanked the Manchester sabre-men? If you do not reform your Liturgy, it will be reformed for you, and sooner than you think! The dishonest interpretations, by defence of which even the minds of children are corrupted, and which throw their shoots into literature and commerce, will be sent to the place whence they came: and over the door of the established organization for teaching religion will be posted the following notice:

"Shift and Subterfuge, Shuffle and Dodge,
No longer here allowed to lodge!"

All this ought to be written by some one who belongs to the Establishment: in him, it would be quite prudent and proper; in me, it is kind and charitable.—A. De M.

[7] But few do have access to it, for the work is not at all common, and this Piscator is rarely mentioned.

folio of 1537). I am told that there is a *Rituale* in the Index Expurgatorius, but I have not thought it worth while to examine whether this be the one: I am rather inclined to think, as I have heard elsewhere, that the book was held too dangerous for the faithful to know of it, even by a prohibition: it would not surprise me at all if Roman Christians should deny its existence.[8]

It amuses me to give, at a great distance of time, a small Rowland for a small Oliver,[9] which I received, *de par l'Eglise*,[10] so far as lay in the Oliver-carrier more than twenty years ago. The following contribution of mine to *Notes and Queries* (3d Ser. vi. p. 175, Aug. 27, 1864) will explain what I say. There had been a complaint that a contributor had used the term *Papist,* which a very excellent dignitary of the Papal system pronounced an offensive term:

PAPIST.

The term *papist* should be stripped of all except its etymological meaning, and applied to those who give the higher and final authority to the declaration *ex cathedrâ*[11] of the Pope. See Dr. Wiseman's[12] article, *Catholic Church,* in the *Penny Cyclopædia.*

What is one to do about these names? First, it is clear that offence should, when possible, be avoided: secondly, no one must be required to give a name which favors *any* assumption made by those to whom it is given, and not

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[8] This derivation has been omitted.—S. E. De M.

[9] A blow for a blow. Roland and Oliver were two of the paladins of Charlemagne whose exploits were so alike that each was constantly receiving credit for what the other did. Finally they met and fought for five days on an island in the Rhine, but even at the end of that period it was merely a drawn battle.

[10] "In the name of the church."

[11] "From the chair," officially.

[12] Nicholas Patrick Stephen Wiseman (1802-1865), whose elevation to the archbishopric of Westminster and the cardinalate (1850) led to the act prohibiting Roman Catholics from assuming episcopal titles in England, a law that was never enforced

granted by those who give it. Thus the subdivision which calls itself distinctly *Evangelical* has no right to expect others to concede the title. Now the word *Catholic,* of course, falls under this rule; and even *Roman Catholic* may be refused to those who would restrict the word *Catholic* to themselves. *Roman Christian* is unobjectionable, since the Roman Church does not deny the name of Christian to those whom she calls heretics. No one is bound in this matter by Acts of Parliament. In many cases, no doubt, names which have offensive association are used merely by habit, sometimes by hereditary transmission. Boswell records of Johnson that he always used the words "dissenting teacher," refusing *minister* and *clergyman* to all but the recipients of episcopal ordination.

This distinctive phrase has been widely adopted: it occurs in the Index of 3d S. iv. [*Notes and Queries*]. Here we find "Platts (Rev. John), Unitarian teacher, 412;" the article indexed has "Unitarian minister."

This, of course is habit: an intentional refusal of the word *minister* would never occur in an index. I remember that, when I first read about Sam Johnson's little bit of exclusiveness, I said to myself: "Teacher? Teacher? surely I remember One who is often called *teacher,* but never *minister* or *clergyman*: have not the dissenters got the best of it?"

When I said that the Roman Church concedes the epithet Christians to Protestants, I did not mean that all its adherents do the same. There is, or was, a Roman newspaper, the *Tablet,* which, seven or eight years ago, was one of the most virulent of the party journals. In it I read, referring to some complaint of grievance about mixed marriages, that if *Christians* would marry *Protestants* they must take the consequences. My memory notes this well; because I recollected, when I saw it, that there was in the stable a horse fit to run in the curricle with this one. About seventeen years ago an Oxford M. A., who hated mathe-

matics like a genuine Oxonian of the last century, was writing on education, and was compelled to give some countenance to the nasty subject. He got out cleverly; for he gave as his reason for the permission, that man is an arithmetical, geometrical, and mechanical *animal,* as well as a rational *soul.*

The *Tablet* was founded by an old pupil of mine, Mr. Frederic Lucas,[18] who availed himself of his knowledge of me to write some severe articles—even abusive, I was told, but I never saw them—against me, for contributing to the *Dublin Review,* and poking my heretic nose into orthodox places. Dr. Wiseman, the editor, came in for his share, and ought to have got all. Who ever blamed the pig for intruding himself into the cabin when the door was left open? When Mr. Lucas was my pupil, he was of the Society of Friends—in any article but this I should say *Quaker*—and was quiet and gentlemanly, as members of that Church—in any article but this I should, from mere habit, say *sect*—usually are. This is due to his memory; for, by all I heard, when he changed his religion he ceased to be Lucas couchant, and became Lucas rampant, fanged and langued gules. (I looked into Guillim[14] to see if my terms were right: I could not find them; but to prove I have been there, I notice that he calls a violin a *violent.* How comes the word to take this form?) I met with several Roman Christians, born and bred, who were very much annoyed at Mr. Lucas and his doings; and said some severe things about new converts needing kicking-straps.

[18] He was born in 1812 and was converted to Catholicism in 1839. He founded the *Tablet* in London in 1840, removing its office to Dublin in 1849. He became M. P. in 1852, and at the time of his death (1855) he was preparing a memorial to the Pope asking him to annul the proclamation of an Irish bishop prohibiting his priests from taking part in politics.

[14] John Guillim (1565-1621) was the first to systematize and illustrate the whole science of heraldry. He published *A display of Heraldrie: manifesting a more easie accesse to the knowledge thereof* in 1610.

The mention of Dr. Wiseman reminds me of another word, appropriated by Christians to themselves: *fides;*[15] the Roman faith is *fides,* and nothing else; and the adherents are *fideles.*[16] Hereby hangs a retort. When Dr. Wiseman was first in England, he gave a course of lectures in defence of his creed, which were thought very convincing by those who were already convinced. They determined to give him a medal, and there was a very serious discussion about the legend. Dr. Wiseman told me himself that he had answered to his subscribers that he would not have the medal at all unless—(naming some Italian authority, whom I forget) approved of the legend. At last *pro fide vindicata*[17] was chosen: this may be read either in a Popish or heretical sense. The feminine substantive *fides* means confidence, trust, (it is made to mean *belief*), but *fidis,* with the same ablative, *fide,* and also feminine, is a *fiddle-string.*[18] If a Latin writer had had to make a legend signifying "For the defence of the fiddle-string," he could not have done it otherwise, in the terseness of a legend, than by writing *pro fide vindicata.* Accordingly, when a Roman Christian talks to you of the *faith,* as a thing which is his and not yours, you may say *fiddle.* I have searched Bonaventura Piscator in vain for notice of this ambiguity. But the Greeks said fiddle; according to Suidas,[19] σκινδαπσος[20]—a word meaning a four stringed instrument played with a quill—was an exclamation of contemptuous dissent. How the wits of different races jump!

[15] "Faith."

[16] "Faithful."

[17] "For the faith vindicated."

[18] The words are of the same root, and hence our word *fiddle.* Some suppose this root means a *rope,* which, as that to which you trust, becomes, in one divergence, confidence itself—just as a *rock,* and other words, come to mean reliance—and in another, a little string.—A. De M.

[19] The Greek lexicographer, a Christian, living after 1000 A. D. His lexicon was first printed at Milan in 1499.

[20] *Skindapsos.*

I am reminded of a case of *fides vindicata,* which, being in a public letter, responding to a public invitation, was not meant to be confidential. Some of the pupils of University College, in which all subdivisions of religion are (1866; *were,* 1867) on a level, have of course changed their views in after life, and become adherents of various high churches. On the occasion of a dinner of old students of the College, convened by circular, one of these students, whether then Roman or Tractarian Christian I do not remember, not content with simply giving negative answer, or none at all, concocted a jorum of theological rebuke, and sent it to the Dinner Committee. Heyday! said one of them, this man got out of bed backwards! How is that? said the rest. Why, read his name backwards, and you will see. As thus read it was—*No grub!*[21]

THE WORD CHURCH.

To return to *Notes and Queries.* The substitution in the (editorial) index of "Unitarian teacher," for the contributor's "Unitarian minister," struck me very much. I have seldom found such things unmeaning. But as the journal had always been free from editorial sectarianisms, —and very apt to check the contributorial,—I could not be sure in this case. True it was, that the editor and publisher had been changed more than a year before; but this was not of much force. Though one swallow does not make a summer, I have generally found it show that summer is coming. However, thought I to myself, if this be Little Shibboleth, we shall have Big Shibboleth by-and-bye. At last it came. About a twelvemonth afterwards, (3d S. vii. p. 36) the following was the *editorial* answer to the question when the establishment was first called the "Church of England and Ireland":

[21] This was John William Burgon (1813-1888), Gresham professor of theology (1867) and dean of Chichester. He was an ultra-conservative, opposing the revised version of the New Testament, and saying of the admission of women to the university examinations that it was "a thing inexpedient and immodest."

"That unmeaning clause, 'The United Church of England and Ireland,' which occurs on the title-page of *The Book of Common Prayer*, was first used at the commencement of the present century. The authority for this phrase is the fifth article of the Union of 1800: 'That the Churches of England and Ireland be united into one *Protestant* (!) episcopal Church, to be called "The United Church of England and Ireland." ' Of course, churchmen are not responsible for the theology of Acts of Parliament, especially those passed during the dark ages of the Georgian era."

That is to say, the journal gives its adhesion to the party which—under the assumed title of *the* Church of England—claims for the endowed corporation for the support of religion rights which Parliament cannot control, and makes it, in fact, a power above the State. The State has given an inch: it calls this corporation by the name of the "United *Church* of England and Ireland," as if neither England nor Ireland had any other Church. The corporation, accordingly aspires to an ell. But this the nation will only give with the aspiration prefixed. To illustrate my allusion in a delicate way to polite ears, I will relate what happened in a Johnian lecture-room at Cambridge, some fifty years ago, my informant being present. A youth of undue aspirations was giving a proposition, and at last said, "Let E F be produced to 'L':" "Not quite so far, Mr.——," said the lecturer, quietly, to the great amusement of the class, and the utter astonishment of the aspirant, who knew no more than a Tractarian the tendency of his construction.

This word *Church* is made to have a very mystical meaning. The following dialogue between Ecclesiastes and Hæreticus, which I cannot vouch for, has often taken place in spirit, if not in letter: E. The word *Church* (ἐκκλη-σία)[22] is never used in the New Testament except generally or locally for that holy and mystical body to which the sacraments and the ordinances of Christianity are entrusted.

[22] *Ekklesia*, or *ecclesia*.

H. Indeed! E. It is beyond a doubt (here he quoted half a dozen texts in support). H. Do you mean that any doctrine or ordinance which was solemnly practised by the ἐκκλησια is binding upon you and me? E. Certainly, unless we should be cut off from the congregation of the faithful. H. Have you a couple of hours to spare? E. What for? H. If you have, I propose we spend them in crying, Great is Diana of the Ephesians! E. What do you mean? H. You ought to know the solemn service of the ἐκκλησια (Acts xix. 32, 41), at Ephesus; which any one might take to be true Church, by the more part not knowing wherefore they were come together, and which was dismissed, after one of the most sensible sermons ever preached, by the Recorder. E. I see your meaning: it is true, there is that one exception! H. Why, the Recorder's sermon itself contains another, the ἐννομος ἐκκλησια,[23] legislative assembly. E. Ah! the New Testament can only be interpreted by the Church! H. I see! the Church interprets itself into existence out of the New Testament, and then interprets the New Testament out of existence into itself!

I look upon all the Churches as fair game which declare of me that *absque dubio in æternum peribo* ;[24] not for their presumption towards God, but for their personal insolence towards myself. I find that their sectaries stare when I say this. Why! they do not speak of you in *particular*! These poor reasoners seem to think that there could be no meaning, as against me, unless it should be propounded that "without doubt he shall perish everlastingly, especially A. De Morgan." But I hold, with the schoolmen, that "*Omnis* homo est animal" in conjunction with "Sortes est homo" amounts to "*Sortes* est animal."[25] But they do not mean it *personally*! Every universal proposition is per-

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[23] *Ennomos ekklesia.*

[24] "Without doubt I shall perish forever."

[25] "Every man is an animal." "Sortes is a man." "Sortes is an animal."

sonal to every instance of the subject. If this be not conceded, then I retort, in their own sense and manner, "Whosoever would serve God, before all things he must not pronounce God's decision upon his neighbor. Which decision, except every one leave to God himself, without doubt he is a bigoted noodle."

The reasoning habit of the educated community, in four cases out of five, permits universal propositions to be stated at one time, and denied, *pro re nata*,[26] at another. "Before we proceed to consider any question involving physical principles, we should set out with *clear ideas* of the naturally possible and impossible." The eminent man who said this, when wanting it for his views of mental education (!) never meant it for more than what was in hand, never assumed it in the researches which will give him to posterity! I have heard half-a-dozen defences of his having said this, not one of which affirmed the truth of what was said. A worthy clergyman wrote that if A. B. had said a certain thing the point in question would have been established. It was shown to him that A. B. *had* said it, to which the reply was a refusal to admit the point because A. B. said it in a second pamphlet and in answer to objections. And I might give fifty such instances with very little search. Always assume more than you want; because you cannot tell how much you may want: put what is over into the didn't-mean-that basket, or the extreme case whatnot.

PROTESTANT AND PAPAL CHRISTENDOM.

Something near forty years of examination of the theologies on and off—more years very much on than quite off—have given me a good title—to myself, I ask no one else for leave—to make the following remarks: A conclusion has *premises,* facts or doctrines from proof or authority, and *mode of inference.* There may be invention or false-

[26] "For a special purpose."

hood of premise, with good logic; and there may be tenable premise, followed by bad logic; and there may be both false premise *and* bad logic. The Roman system has such a powerful manufactory of premises, that bad logic is little wanted; there is comparatively little of it. The doctrine-forge of the Roman Church is one glorious compound of everything that could make Heraclitus[1] sob and Democritus[2] snigger. But not the only one. The Protestants, in tearing away from the Church of Rome, took with them a fair quantity of the results of the Roman forge, which they could not bring themselves to give up. They had more in them of Martin than of Jack. But they would have no premises, except from the New Testament; though some eked out with a few general Councils. The consequence is that they have been obliged to find such a logic as would bring the conclusions they require out of the canonical books. And a queer logic it is; nothing but the Roman forge can be compared with the Protestant loom. The picking, the patching, the piecing, which goes to the Protestant *termini ad quem,*[3] would be as remarkable to the general eye, as the Roman manufacture of *termini a quo,*[4] if it were not that the world at large seizes the character of an asserted fact better than that of a mode of inference. A grand step towards the deification of a lady, made by alleged revelation 1800 years after her death, is of glaring evidence: two or three additional shiffle-shuffles towards defence of saying the Athanasian curse in church and unsaying it out of church, are hardly noticed. Swift has bungled his satire where he makes Peter a party to finding out what he wants, *totidem syllabis* and *totidem literis,*

[1] Heraclitus of Ephesus, the weeping philosopher, 6th century B. C.

[2] Democritus, the laughing philosopher, founder of the atomistic theory, 5th century B. C.

[3] "Ends to which."

[4] "Ends from which."

when he cannot find it *totidem verbis.*[5] This is Protestant method: the Roman plan is *viam faciam*; the Protestant plan is *viam inveniam.*[6] The public at large begins to be conversant with the ways of *wriggling out,* as shown in the interpretations of the damnatory parts of the Athanasian Creed, the phrases of the Burial Service, etc. The time will come when the same public will begin to see the ways of *wriggling in.* But one thing at a time: neither Papal Rome nor Protestant Rome was built—nor will be pulled down—in a day.

The distinction above drawn between the two great antitheses of Christendom may be illustrated as follows. Two sets of little general dealers lived opposite to one another: all sold milk. Each vaunted its own produce: one set said that the stuff on the other side the way was only chalk and water; the other said that the opposites sold all sorts of filth, of which calves' brain was the least nasty. Now the fact was that both sets sold milk, and from the same dairy: but adulterated with different sorts of dirty water: and both honestly believed that the mixture was what they were meant to sell and ought to sell. The great difference between them, about which the apprentices fought each other like Trojans, was that the calves' brain men poured milk into the water, and the chalk men poured water into the milk. The Greek and Roman sects on one side, the Protestant sects on the other, must all have *churches*: the Greek and Roman sects pour the New Testament into their churches; the Protestant sects pour their churches into the New Testament. The Greek and Roman insist upon the New Testament being no more than part and parcel of their churches: the Protestant insist upon their churches being as much part and parcel of the New Testament. All dwell vehemently upon the doctrine that there must be milk

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[5] "In just as many syllables," "With just as many letters," "In just as many words."

[6] "I shall make a way," "I shall find a way."

somewhere; and each says—I have it. The doctrine is true: and can be verified by any one who can and will go to the dairy for himself. Him will the several traders declare to have no milk at all. They will bring their own wares, and challenge a trial: they want nothing but to name the judges. To vary the metaphor, those who have looked at Christianity in open day, know that all who see it through painted windows shut out much of the light of heaven and color the rest; it matters nothing that the stains are shaped into what are meant for saints and angels.

But there is another side to the question. To decompose any substance, it must be placed between the poles of the battery. Now theology is but one pole; philosophy is the other. No one can make out the combinations of our day unless he read the writings both of the priest and the philosopher: and if any one should hold the first word offensive, I tell him that I mean *both* words to be *significant.* In reading these writings, he will need to bring both wires together to find out what it is all about. Time was when most priests were very explicit about the fate of philosophers, and most philosophers were very candid about their opinion of priests. But though some extremes of the old sorts still remain, there is now, in the middle, such a fusion of the two pursuits that a plain man is wofully puzzled. The theologian writes a philosophy which seems to tell us that the New Testament is a system of psychology; and the philosopher writes a Christianity which is utterly unintelligible as to the question whether the Resurrection be a fact or a transcendental allegory. What between the theologian who assents to the Athanasian denunciation in what seems the sense of no denunciation, and the philosopher who parades a Christianity which looks like no revelation, there, is a maze which threatens to have the only possible clue in the theory that everything is something else, and nothing is anything at all. But this is a paradox far beyond my handling: it is a Budget of itself.

RELIGION AND PHILOSOPHY.

Religion and Philosophy, the two best gifts of Heaven, set up in opposition to each other at the revival of letters; and never did competing tradesmen more grossly misbehave. Bad wishes and bad names flew about like swarms of wasps. The Athanasian curses were intended against philosophers; who, had they been a corporation, with state powers to protect them, would have formulized a *per contra*. But the tradesmen are beginning to combine: they are civil to each other; too civil by half. I speak especially of Great Britain. Old theology has run off to ritualism, much lamenting, with no comfort except the discovery that the cloak Paul left at Troas was a chasuble. Philosophy, which always had a little sense sewed up in its garments—to pay for its funeral?—has expended a trifle in accommodating itself to the new system. But the two are poles of a battery; and a question arises.

> If Peter Piper picked a peck of pepper,
> Where is the peck of pepper Peter Piper picked?

If Religion and Philosophy be the two poles of a battery, whose is the battery Religion and Philosophy have been made the poles of? Is the change in the relation of the wires any presumption of a removal of the managers? We know pretty well who handled the instrument: has he resigned or been[1] turned out? Has he been put under restric-

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[1] The notion that the Evil Spirit is a functionary liable to be dismissed for not attending to his duty, is, so far as my reading goes, utterly unknown in theology. My first wrinkle on the subject was the remark of the Somersetshire farmer upon Palmer the poisoner—"Well! if the Devil don't take he, he didn't ought to be allowed to be devil no longer."—A. De M.

William Palmer (1824-1856) was a member of the Royal College of Surgeons and practised medicine at London. He was hanged in 1856 for having poisoned a friend and was also suspected of having poisoned his wife and brother for their insurance money, besides being guilty of numerous other murders. His trial was very much in the public attention at the time.

tion? A fool may ask more questions than twenty sages can answer: but there is hope; for twenty sages cannot ask more questions than one reviewer can answer. I should like to see the opposite sides employed upon the question, What are the *commoda,* and what the *pericula,*[2] of the current approximation of Religion and Philosophy?

All this is very profane and irreverent! It has always been so held by those whose position demands such holding. To describe the Church as it is passes for assailing the Church as it ought to be with all who cannot do without it. In Bedlam[3] a poor creature who fancied he was St. Paul, was told by another patient that he was an impostor; the first maniac lodged a complaint against the second for calling St. Paul an impostor, which, he argued, with much appearance of sanity, ought not to be permitted in a well regulated madhouse. Nothing could persuade him that he had missed the question, which was whether *he* was St. Paul. The same thing takes place in the world *at large.* And especially must be noted the refusal to permit to the *profane* the millionth part of the licence assumed by the *sacred.* I give a sound churchman the epitaph of St. John Long; the usual pronunciation of whose name must be noted—

> "Behold! ye quacks, the vengeance strong
>   On deeds like yours impinging:
> For here below lies St. John Long[4]
>   Who now must be *long singeing.*"

How shameful to pronounce this of the poor man! What, Mr. Orthodox! may I not do in joke to one pretender what

[2] Advantages and dangers.

[3] The old priory of St. Mary of Bethlehem in London, was used as an asylum for the insane. The name was corrupted to Bedlam.

[4] Referring to the common English pronunciation of St. John, almost Sinjin. John St. John Long (1798-1834), an Irishman by birth, practised medicine in London. He claimed to have found a specific for rheumatism and tuberculosis, but upon the death of one of his patients in 1830 he was tried for manslaughter. He died of tuberculosis four years later, refusing to take his own treatment.